REMARKS

The Examiner had required restriction to either claims 1-18, drawn to a method, or claim 19 drawn to a product. A provisional election was made on January 5, 2005 with traverse to prosecute the invention of Group I, claims 1-18. In the present amendment affirmation of this election is made and therefore claim 19 has been withdrawn from consideration.

The Examiner objected to the specification because of an informality at paragraph [0001]. By the present amendment paragraph [0001] has been amended to indicate the appropriate priority claims of the present application. Thus this objection is believed to be overcome and should be withdrawn.

The Examiner objected to claims 1, 6, 16, and 17 due to a number of informalities in the claims. Claims 1, 6, 16, and 17 have been amended to overcome these objections, thus the objections should be withdrawn.

The Examiner rejected clams 1-7 and 9-18 under 35 U.S.C. §103(a) as being unpatentable over Longo et al. US 3,723,165 (in view of Browning US 4,416,421). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching, suggestion, or motivation that would lead one of ordinary skill in the art to combine the references. *In re Sang Su Lee*, 277 F.3d 1338 ; 61 USPQ 2nd. 1430 (Fed. Cir. 2002), citing *Brown & Williamson Tobacco Corp, v. Phillip Morris, Inc.,* 229 F.3d 1120, 1124-25 (Fed. Cir. 2000); *In re Napier,* 34 U.S.P.Q. 2d 1782 (Fed. Cir. 1995). Elements of separate prior patents cannot be combined when there is no suggestion of such combination anywhere in those patents. *Panduit Corp. v. Dennison Mfg. Co.,* 1 USPQ 2d 1593 (Fed. Cir. 1987). Further, when claimed subject matter has been rejected as being obvious in view of a combination of prior art references a

proper analysis under section 103 requires a consideration of two factors: [1] Whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and [2] whether the prior art would also have revealed that, in so making or carry out , those of ordinary skill would have a reasonable expectation of success. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991), *In re Dow Chemical Company*, 5 USPQ2d 1529 (Fed. Cir. 1988). Both the suggestion and the reasonable expectation of success must be found in the prior art not in the applicant's disclosure. *Id.*

By the present amendment claim 1 has been amended to make it clear that the temperature of the gas is selected to be insufficient to thermally soften the first population of particles. This was the intended interpretation of the claim as written. To make it clearer the claim has been amended to recite this. Support for this amendment can be found in the following portions of the specification: the Abstract; paragraph [0026]; paragraph [0027]; paragraph [0028]; paragraph [0031]; and paragraph [0032]. In all these portions of the specification it is made clear that the temperature of the main gas is chosen such that the first particle population, which is being kinetically sprayed, is not in any way thermally softened nor is there any change in the solid phase of the original particles or their property as a result of the spray process.

This is completely unlike the teaching of the primary reference of the Examiner, namely, Longo et al. Longo et al. makes it clear that the flame spraying process is utilized to ensure, as the Examiner admits, that the high temperature plastic powders are softened at that temperature while the metal powders are completely molten. In column 3, lines 32-42 Longo et al. states:

> The term "surface heat softened" as used herein is intended to describe a thermal conditioning of the plastic particles in which their surface is heated to a temperature at which the same will deform and

> flow under pressure or impact without complete melting of the particles and without heating the entire particle to a detrimental or degrading temperature. Such surface heat softening may include a superficial chemical or physical modification of the plastic surface of each particle.

Thus, Longo et al. teaches that one particle population is molten and the other is thermally softened. Thus, it **teaches away** from the present invention which requires that one particle population be non-thermally softened and non-melted and that the second particle population be in a molten state. The secondary reference of Browning '421 fails to cure the deficiencies of the primary reference with respect to this parameter. There is no teaching, suggestion, or motivation within Browning that would lead one of ordinary skill of the art to go against the teaching away of Longo et al. which requires that the particle populations comprise one that is thermally softened and another that is molten. For this reason the rejection of claim 1 and the claims which depend therefrom under 35 U.S.C. §103(a) is improper and must be withdrawn. Furthermore, with respect to claims 15 and 17, which depend from claim 1, there is no disclosure in either reference of the inner diameter of the injector as required by claim 15 or the diameter of the throat region as required in claim 17. Browning only discloses a single throat diameter in column 4, lines 46-48 of 5/16 of an inch. This is a diameter of over 7 millimeters, which is more than twice the limitation found within claim 17 of the present application. Thus, neither reference provides any teaching that would lead one of ordinary skill in the art to select either the specific inner diameter of the injector as claimed in clam 15 or the throat diameter range claimed in claim 17. Thus, the rejection of these claims under 35 U.S.C. §103(a) based on the cited references is additionally improper on these grounds and must be withdrawn.

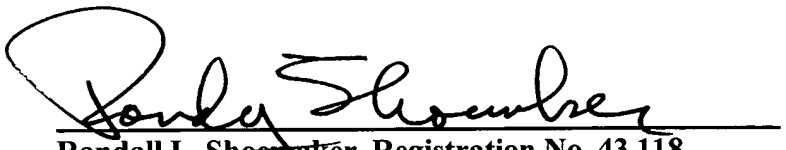
The Examiner also rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Longo et al. in view of Browning '421 as applied to claims 1-7 and 9-18 and further in view of Browning US 5,531,590. The Examiner relies on Browning '590 for teaching injection of the particles into the diverging region of the nozzle. Claim 8 depends from claim 1. As discussed above the primary and secondary references fail to make each and every limitation of claim 1 obvious and the deficiencies of the primary and secondary references are not overcome by the additional disclosure of Browning '590. Thus, the rejection of claim 8 based on the cited references is improper and must be withdrawn.

The Examiner also objected to the oath as being defective. Accompanying this response is a new oath including the corrections requested by the Examiner thus this objection is believed to be overcome and should be withdrawn.

Applicant's attorney respectfully submits that the claims as amended are now in condition for allowance and respectfully requests such allowance.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS



April 28, 2005
Date

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Rainie Mills

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